



# Anti-NO2-Tyrosine polyclonal antibody (DPAB4013)

This product is for research use only and is not intended for diagnostic use.

## PRODUCT INFORMATION

<b>Product Overview</b>	Rabbit Anti-NO2-Tyrosine Polyclonal AntibodyRabbit Anti-NO2-Tyrosine Polyclonal Antibody
<b>Specificity</b>	<p>Antiserum previously preabsorbed on protein carriers and purified by ammonium sulfate precipitation. This antibody targets conjugated NO2-Tyrosine. This antibody does not recognize free NO2-Tyrosine.</p> <p>Using a conjugate NO2-Tyrosine-Glutaraldehyde-BSA, antibody specificity was performed with an ELISA test by competition experiments with the following compounds:</p>
<b>Immunogen</b>	Synthetic NO2-Tyrosine conjugated to bovine serum albumin
<b>Isotype</b>	IgG
<b>Source/Host</b>	Rabbit
<b>Species Reactivity</b>	N/A
<b>Conjugate</b>	Unconjugated
<b>Applications</b>	ELISA, IHC/ICC, IB, WB
<b>Format</b>	Lyophilized and reconstituted with deionized water / 50% glycerol
<b>Size</b>	50 µl
<b>Preservative</b>	None
<b>Storage</b>	Store the antibody at 4°C for one month or -20°C in undiluted aliquots for up to one year. Avoid repeated freezing and thawing. Gently spin down material before use; 5-10 seconds in a microfuge should be adequate.

# BACKGROUND

## Introduction

Tyrosine (4-hydroxyphenylalanine, or 2-amino-3(4-hydroxyphenyl)-propanoic acid) is one of the 20 amino acids that are used by cells to synthesize proteins. Tyrosine cannot be completely synthesized by animals, although it can be made by hydroxylation of phenylalanine if the latter is in abundant supply. There are three structural isomers of Tyr, namely para-Tyr (p-Tyr), meta-Tyr (m-Tyr) and ortho-Tyr (o-Tyr). Enzymatically, only the first isomer (p-Tyr) is produced from L-Phe by the Phe-hydroxylase enzyme. The other two isoforms, m-Tyr and o-Tyr can be produced as a consequence of free radical attack on Phe in states with increased oxidative stress. Tyrosine is converted to DOPA by the enzyme, tyrosine hydroxylase. It plays a key role in signal transduction, since it can be tagged with a phosphate group (phosphorylated) by protein kinases to alter the functionality and activity of certain enzymes. (In its phosphorylated state, it is sometimes referred to as phosphotyrosine.) Tyrosine is also a precursor to the thyroid hormones thyroxine and tri-iodothyronine, the pigment melanin, and the biologically-active catecholamines dopamine, norepinephrine and epinephrine.

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## Keywords

2 amino 3 (4 hydroxyphenyl) propanoic acid; 4 hydroxyphenylalanine; Tyrosine

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